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CLASSIFICATION SECRET
SECURITY INFORMATION
CENTRAL INTELLIGENCE AGENCY

REPORT NO. [redacted]

# INFORMATION REPORT

CD NO.

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| COUNTRY | East Germany | DATE DISTR. | 2 October 1953 |
| SUBJECT | 1. Bergmann-Borsig Production<br>2. Electrification of Leipzig Area Railroad Lines | NO. OF PAGES | 2 |
| PLACE ACQUIRED | [redacted] | NO. OF ENCLS. (LISTED BELOW) | 25X1A |
| DATE OF INFO. | [redacted] | SUPPLEMENT TO REPORT NO. | 25X1C |

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1. VEB Bergmann-Borsig Production

a. At present the highest priority at the VEB Bergmann-Borsig plant, Berlin-Wilhelmsruh, is given to the production of a condensation turbine of 16,000 kilowatt capacity with a speed of 6,000 rpm.; this turbine is destined for shipment to Russia.

b. The Klingenberg power plant has for the first time put into service turbines with full hydraulic control, which were developed in the drafting and construction section of the Bergmann-Borsig plant and for which a patent has already been granted.

c. In the Bergmann-Borsig generator construction shop a large centrifugal pit to test the strength and stability of all rotating parts of generators and turbine rotors has been built.

2. VEB Bergmann-Borsig Production Difficulties.

a. Bergmann-Borsig has repeatedly had difficulties in producing condensation turbines of 25,000 kw. capacity for the Magdeburg and "Elbe" power plants. The finished cast-metal housings contain many defects (Lunker), which are removed by fitting in adjusting pieces and welding them into the housing. It appears that even the models for these castings contained defects, for the steam does not flow as designed in the blue prints. The defects often appeared only after the turbines were finished and when the compression tests were made; then power water emerged from places not provided for in the blue prints.

b. The quality of large forgings, such as shafts and wheel discs, has been poor. The forgings are produced by the Ernst Thaelman works, formerly Krupp-Gruson, Magdeburg, and then are sent to Bergmann-Borsig to be finished. It is reported that out of every ten shafts, seven were useless; likewise large wheel bodies with a 1550 mm. diameter have not yet been produced without defects. Often, after these wheel bodies were almost completed, defects in the forging metal became apparent, caused by poor alloying metal and poor forging. Attempts to make these forgings usable failed.

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e. The material of which the nozzle flaps were made were not of the required quality, because its important alloying constituent, molybdenum, is not available. The strength factors of the flaps had to be recomputed and the flaps were then released for assembly. It is reported that they will be exchanged later on. The supplier is the ABUS foundry, Berlin-Lichtenburg. The length of the last circular height of the blades is 450 mm. These blades are equipped with an axial "Tannenzapfen-Fuss".[1] They are exposed, that is, they have no metal cover plate and no wire binding. This is reportedly a completely new design.

f. The milling of the guide blades presents at present a special difficulty, because of a shortage of specific machines and equipment. To remedy this difficulty, it was necessary to raise the steam temperature from 275 degrees C to 325 degrees. By this means, nozzle flaps with cast metal can be used and a complicated milling procedure can be avoided.

g. The former small-arms factory in Suhl, Thuringia, has converted to the production of turbine blades. The Suhl plant now produces them much better and cheaper than does Bergmann-Borsig.

h. Lately Bergmann-Borsig has also taken over the balancing of shafts, rotors and turbine runners (Laufer). This balancing procedure still causes difficulties. Recently, in balancing the last stage of the runner in a 20 stage high-pressure runner of a turbine installation to be produced for the BRABAG (Braunkohle-Benzin AG, Berlin) and the Zeitz hydrogenation works, the material of the runner was weakened to such a degree that it could no longer be used. The speed of the balancing machine can be increased to 1430 rpm.

3. Electrification of Leipzig-Halle and Leipzig-Dessau Railroad Lines. The generators of the Muldenstein power plant have been bought back by East Germany from Russia in order to reelectrify the Leipzig-Halle and Leipzig-Dessau railroad lines which were formerly power-operated lines. In 1945 four generators were disassembled in Muldenstein to be delivered to Russia; after they were returned by the Russians they were sent to the Bergmann-Borsig plant for repairs.

1. [redacted] Comment: Christmas tree root.

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